WHAT IS CLAIMED IS:

1. A basilar aneurysm occlusion device, comprising:

a radially expandable support structure, moveable between a reduced cross section for transluminal navigation and an enlarged cross section for retention within the basilar artery;

at least one axially extending link; and

a basilar aneurysm patch attached to the link, and moveable between a reduced cross section orientation and an implanted orientation;

wherein the patch resides in an axial orientation when in the reduced cross section orientation and a transverse orientation when in the implanted orientation.

2. A basilar aneurysm occlusion device as in Claim 1, wherein the support structure comprises a self expandable wire frame.

3. A basilar aneurysm occlusion device as in Claim 2, wherein the wire frame comprises a nickel titanium alloy.

4. A basilar aneurysm occlusion device as in Claim 1, wherein the patch comprises an expandable frame.

5. A basilar aneurysm occlusion device as in Claim 4, wherein the patch further comprises a membrane supported by the frame.

6. A basilar aneurysm occlusion device as in Claim 5, wherein the membrane comprises ePTFE.

7. A basilar aneurysm occlusion device as in Claim 5, wherein the membrane supports neointimal ingrowth.

8. A method of treating a distal basilar aneurysm, comprising the steps of:

positioning an embolic material in a distal basilar aneurysm;

positioning a tubular support structure within the basilar artery such that a retention element carried by the support inhibits escape of material from the aneurysm.

9. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning an embolic material step is accomplished before the positioning a tubular support structure step.

10. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning an embolic material step is accomplished after the positioning a tubular support structure step.

11. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning an embolic material step is accomplished during the positioning a tubular support structure step.

12. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning an embolic material step comprises introducing at least one embolic coil into the aneurysm.

13. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning an embolic material step comprises introducing an embolic composition into the aneurysm.

14. A method of treating a distal basilar aneurysm as in Claim 13, wherein the composition comprises a hydrogel.

15. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning a tubular support structure step comprises deploying a self expandable support into the basilar artery.

16. A method of treating a distal basilar aneurysm as in Claim 8, wherein the positioning a tubular support structure step comprises deploying a balloon expandable support into the basilar artery.

17. A method of treating a distal basilar aneurysm as in Claim 15, wherein the support structure comprises a wire frame.

18. A method of treating a distal basilar aneurysm as in Claim 17, wherein the support structure comprises a helical coil.

19. A method of treating a distal basilar aneurysm as in Claim 17, wherein the support structure comprises a zig-zag wire, having at least two longitudinal struts connected by at least one apex.

20. A method of treating a distal basilar aneurysm as in Claim 8, wherein the retention element comprises at least one transverse strut for retaining at least one embolic coil within the aneurysm.

21. A method of treating a distal basilar aneurysm as in Claim 20, wherein the retention element comprises a wire frame.

22. A method of treating a distal basilar aneurysm as in Claim 21, further comprising a membrane on the wire frame.

23. A method of treating a distal basilar aneurysm as in Claim 22, wherein the membrane is capable of supporting endothelial ingrowth.

24. A self expandable bifurcation aneurysm occlusion device, comprising:

a tubular support structure having a proximal end, a distal end, and a longitudinal axis;

at least one strut extending distally from the support structure; and

a barrier carried by the strut.

25. A self expandable bifurcation aneurysm occlusion device as in Claim 24, wherein the barrier comprises a wire mesh.

26. A self expandable bifurcation aneurysm occlusion device as in Claim 24, wherein the barrier comprises a polymeric membrane.

27. A self expandable bifurcation aneurysm occlusion device as in Claim 24, wherein the barrier, in an unconstrained expansion, resides in a plane which is transverse to the longitudinal axis.

28. A self expandable bifurcation aneurysm occlusion device as in Claim 26, wherein the membrane is porous.

29. A device for obstructing the opening to an aneurysm, comprising:

a self expandable wire support, having a proximal end, a distal end and a tubular wall extending therebetween, the wall comprising a plurality of struts connected by bends;

an axially oriented opening at the proximal end of the support;

a transverse barrier carried by the distal end of the support; and

at least one lateral opening proximal to the transverse barrier.

30. A device for obstructing the opening to an aneurysm as in Claim 29, wherein the barrier is spaced distally apart from the distal end of the tubular wall.

31. A device for obstructing the opening to an aneurysm as in Claim 30, further comprising at least one link extending between the distal end of the tubular body and the barrier.

32. A device for obstructing the opening to an aneurysm as in Claim 31, comprising at least two axially extending links between the tubular body and the barrier.

33. A flow deflector, for implantation at a bifurcation in a vascular structure, comprising a support structure for positioning in a main vessel proximal to the bifurcation, the support structure having a proximal end, a distal end, and a longitudinal axis, and a flow deflection surface carried by the support structure, the flow deflection surface extending transversely across the longitudinal axis.

34. A flow deflector as in Claim 33, wherein the flow deflection surface is a surface of a wire mesh.

35. A flow deflector as in Claim 33, wherein the flow deflection surface is a surface of a polymeric membrane.

36. A method of isolating an aneurysm, comprising the steps of:

positioning a neointimal cell growth support across the opening of an aneurysm; and

holding the support in position using a retention structure positioned in a vessel outside of the aneurysm.

37. A method of isolating an aneurysm as in Claim 36, wherein the retention structure has a longitudinal axis, and the cell growth support is positioned at an angle of at least about 45 degrees from the longitudinal axis.

38. A method of isolating an aneurysm as in Claim 37, wherein the cell growth support is positioned at an angle within the range of from about 75 degrees to about 105 degrees from the longitudinal axis.

39. A method of isolating an aneurysm as in Claim 37, wherein the holding step comprises deploying a self expandable tubular support structure in a vessel near the aneurysm.

40. An embolic coil for treating an aneurysm, comprising:

at least one embolic microcoil,

a support, for retaining the microcoil in an aneurysm; and

a strut, connecting the microcoil to the support.

41. An embolic coil as in Claim 40, wherein the support is integrally formed with the microcoil.

42. An embolic coil as in Claim 40, wherein the support is in contact with the microcoil.

43. An embolic coil as in Claim 40, wherein the support comprises a self expandable wire structure.

44. An embolic coil as in Claim 43, wherein the self expandable wire structure has a longitudinal axis, and the microcoil is held by the support in a position which intersects the longitudinal axis.

45. An embolic coil as in Claim 40, wherein the strut comprises an extension of the support.